IN THE CLAIMS

Please cancel claims 16-21.

Please add claims 22-27.

Please amend claims 1-9, and 11-15 as follows:

1.(Currently Amended) A gearbox comprising,

a plurality of ~~shafts~~ gears ~~each shaft having a gear for~~ forming ~~a~~ gearsets, each gearset ~~between~~ including at least one ~~adjacent~~ shafts ~~in the gearbox~~ extending from the gearset, wherein ~~all~~ the gearsets are sized having ratios varying by degrees ~~in~~ of separation of a common ratio in a geometric sequence.

2.(Currently Amended) A gearbox as in claim 1 wherein,

the degrees of separation ~~in of the degree of difference of~~ the common ratio in the geometric sequence for all gearsets ~~ratios between an adjacent pair of shafts~~ is the same.

3.(Currently Amended) A gearbox as in claim ~~2~~ 1 wherein,

the ~~degree of separation of the~~ common ratio ~~of~~for ~~the gearsets between the pairs of shafts~~ is calculated by ~~first~~ dividing ~~the~~ a number of gearset combinations of forward speeds in the gearbox by ~~the~~ a number of gearsets between two shafts, where the number of gearsets between two shafts is two or more, ~~to determine the common ratio of the gearsets between that pair of shafts,~~

~~then determining~~and the degrees of separation of the common ratio ~~of~~for ~~the~~ gearsets between ~~the~~ a next pair of shafts is determined by dividing the ~~number of degrees of~~ common ratio from the prior pair of shafts ~~divided~~ by a number of gearsets between the next pair of shafts until all shaft pairs are calculated, and further wherein the degrees of separation of the common ratio of ~~the~~ gearsets in ~~the~~ a last

pair of shafts when calculated may have only 1 gearset between them.

4.(Currently Amended) A gearbox as in claim 2 wherein,

the gearsets are sized having a ratio varying by degrees of separation of a common ratio in a geometric sequence equal to 1 ~~the gearset ratio values for the gearsets between each shaft are chosen~~ such that ~~a combination of the gearsets selected in~~ the gearbox yields an input to output ratio of 1 to 1 ~~for the gearbox~~.

5.(Currently Amended) A gearbox as in claim 4 wherein,

a join gear on a shaft of the gearbox engages a first pinion of a first gearset on a first shaft and a second pinion of a second gearset on a second shaft such that the join gear is part of two gearsets of two adjacent gearset units.

6.(Currently Amended) A gearbox as in claim 5 wherein,

a pair of adjacent join gears on a shaft employs an addendum modification ~~shaft~~ shift to account for ~~the~~ a difference in gear teeth sizes of four gearsets installed on three adjacent ~~in spacing between the~~ shafts ~~due to different gear sizes in the gearsets~~ such that ~~the~~ all gear teeth ~~all~~ are configured to mesh ~~properly~~.

7.(Currently Amended) A gearbox as in claim ~~2~~ 1 wherein,

a reverse pinion engages ~~a~~ one gearset on an adjacent pair of shafts for providing one or more reverse speeds.

8.(Currently Amended) A gearbox as in claim ~~2~~ 1 wherein,

a ~~differencial~~ differential is affixed to at least one shaft of an adjacent pair of shafts.

9.(Currently Amended) A gearbox as in claim ~~2~~ 1 wherein,

at least one gearset ~~the gearbox~~ has a frame member.

10.(Original) A gearbox as in claim ~~2~~ 9 wherein,

the gearbox has more than one frame member.

11.(Currently Amended) A gearbox as in claim ~~2~~ 1 wherein,

at least one shaft of an adjacent pair of shafts has ~~two~~ an outward end~~s~~ extending from the gearbox for connecting to other objects.

12.(Currently Amended) A gearbox as in claim 11 wherein,

the at least one shaft of the adjacent pairs of shafts has two outward ends and a gear~~s~~ disposed on each of the respective outward end~~sin the gearbox have teeth on opposite sides and the shaft can be turned around in the gearbox to engage the teeth on the opposite side of the gear~~ configured to connect to a power source.

13.(Currently Amended) A gearbox as in claim ~~2~~ 1 wherein,

the gearbox has at least one split shaft ~~that is a split with~~and a clutch ~~to connect~~coupled to the split shafts.

14.(Currently Amended) A gearbox as in claim ~~2~~1 ~~having~~wherein,

~~5 shafts with 4 sets of gearsets between 4 pair of shafts, wherein the first set of gearsets has 2 gearsets, the second set of gearsets has 2 gearsets, the third set of gearsets has 2 gearsets, and the fourth set of gearsets has 3 gearsets, to produce a~~ the gearbox includes no more than thirteen gearsets and the gearsets are configured to form the gearbox as having 24 forward ~~speeds~~torques ~~when one gearset is selected from between each pair of shafts~~.

15.(Currently Amended) A gearbox as in claim ~~2~~14 ~~having~~wherein,

R is a common ratio in a geometric sequence of forward speeds; and further wherein 4

~~shafts with 3 sets of~~ gearsets ~~between 3 pair of~~are disposed on 5 shafts, and a ~~wherein the~~ first ~~set of~~ gearsets is sized having a ratio of $1/R^{12}$, a second ~~has 2~~ gearsets is sized having a ratio $1/R^{6}$, ~~the second set of~~a third gearsets is sized having a ratio $1/R^{3}$, a fourth ~~has 3 gearsets, the third set of~~ gearsets is sized having a ratio 1/R, to produce a gearbox having 12 reverse speeds~~has 4 gearsets, to produce a gearbox having 24 forward speeds when one gearset is selected from between each pair of shafts~~.

16. – 21.(Canceled)

22.(New) A gearbox as in claim 14, wherein R is a common ratio in a geometric sequence, the gearbox further comprising:

a first frame member includes a first gearset unit having gearsets sized to have a common ratio selected from the group consisting of $1/R^{12}$, $1/R^{8}$ and $1/R^{6}$;

a second frame member includes a second gearset unit having gearsets sized to have a common ratio selected from the group consisting of $1/R^{4}$, $1/R^{2}$ and $1/R^{3}$;

a third frame member includes a third gearset unit having gearsets sized to have a common ratio of 1/R; and

a fourth frame member includes a reverse pinion idle gear and a reverse gear coupled to a power source producing 24 reverse torques.

23.(New) A gearbox as in claim 14, wherein R is a common ratio in a geometric sequence, the gearbox further comprising:

a frame member comprising 3 units of gearsets including:

a first unit having gearsets sized to have a common ratio selected from the group consisting of $1/R^{12}$ and $1/R^{4}$;

a second unit having gearsets sized to have a common ratio selected from the group consisting of $1/R^{6}$ and $1/R^{2}$; and

a third unit having gearsets sized to have a common ratio of 1/R, and a reverse pinion coupled to a power source to produce 12 reverse torques.

24.(New) A gearbox as in claim 14 wherein R is a common ratio in a geometric sequence, the gearbox further comprising:

a frame member includes 4 units of gearsets forming 5 shafts including:

a first unit having gearsets sized to have a common ratio selected from the group consisting of R^0, $1/R^8$ and $1/R^3$;

a second unit having gearsets sized to have a common ratio selected from the group consisting of R^0, $1/R^8$ and $1/R^3$;

a third unit having gearsets sized to have a common ratio selected from the group consisting of $1/R^8$, R^0, and 1/R; and

a fourth unit having gearsets sized to have a common ratio selected from the group consisting of R^0 and 1/R, and a reverse pinion coupled to a power source to produce 24 reverse speeds.

25.(New) A gearbox as in claim 14, wherein R is a common ratio in a geometric sequence, the gearbox further comprising:

a frame member includes 2 units of gearsets forming 3 shafts including:

a first unit having gearsets sized to have a common ratio selected from the group consisting of $1/R^6$ and $1/R^4$; and

a second unit having gearsets sized to have a common ratio of 1/R, and a reverse pinion coupled to a power source to produce 6 reverse speeds.

26.(New) A gearbox as in claim 14, wherein R is a common ratio in a geometric sequence, the gearbox further comprising:

a frame members comprising 4 units of gearsets forming 5 shafts, including a first split input shaft and a second split input shaft such that the gearbox produces an additional 12 forward torques; and

a first unit having a gearsets sized to have a common ratio of R^0;

a second unit having 2 gearsets sized to have a common ratio of $1/R^{12}$;

a third unit of gearsets having gearsets sized to have a common ratio selected from the group consisting of $1/R^4$ and $1/R^3$; and

a fourth unit of gearsets having gearsets sized to have a common ratio of 1/R, and a reverse pinion coupled to a power source to produce 24 reverse speeds.

27.(New) A method of gearbox design comprising:

selecting a number of torques for the gearbox;

determining a number of gearset units based upon a multiplier number representative of the number of torques selected;

providing a number of gearsets in each gearset unit based upon the number of torques selected;

determining a number of shafts equal to the number of gearset units plus one;

determining a degree of separation of a common ratio in a geometric sequence for each gearset unit by dividing the number of torques selected by the number of gearsets in a first gearset unit, and then dividing a remainder of the degree of separation of the common ratio by the number of gearsets in a second gearset unit;

repeating a division step for remaining units until the degree of separation of the common ratio equals one.